

AARON CUPP

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SENIOR / STAFF INFRASTRUCTURE · SRE · PLATFORM ENGINEER

PROFESSIONAL SUMMARY

Infrastructure and site reliability engineer with over two decades building and operating cloud and on-premises platforms across GCP, AWS, and Azure. Deep hands-on work in Kubernetes, GitOps, and Infrastructure as Code (Terraform / OpenTofu), plus infrastructure control evidence for SOX, SOC 2, and PCI-DSS under Big Four external audit. Builds the platform plumbing other teams ship on, and has a habit of finding the failure nobody was looking for before it reaches production. Stays sharp through active open-source work in Rust, Go, and Kubernetes tooling — shipping tested, CI-backed projects end to end.

EXPERIENCE

COMMERCE (FEEDONOMICS)

Remote — Sacramento, CA

Senior Infrastructure Engineer

Jan 2025 – Present

Sole infrastructure IC for FDX Infrastructure — the platform behind Commerce's product-data feed and marketplace optimization engine. Scope spans platform reliability, infrastructure as code, audit and compliance evidence, and internal tooling.

- **Built the GCP Terraform foundation greenfield** — the infrastructure-as-code layout and cloud configuration other teams now build on, including an in-progress colo-to-cloud migration. Among the top contributors by commit volume.
- **Own infrastructure control evidence for SOX, SOC 2, and PCI-DSS under Big Four external audit** — evidence packages, control-gap remediation, and forensic timeline reconstruction from recovered system state.
- **Caught an exhausted production disk quota that would have failed six pending deployments**; reworked the affected changes same-day and built tooling so the condition surfaces instead of failing silently.
- Operate Kubernetes with Flux GitOps and a unified observability stack — Grafana, Prometheus, Mimir, Loki, Alloy, AlertManager — consolidating metrics and logs from many clusters into a single pane of glass.
- Author Terraform / OpenTofu modules and Atlantis automation, keeping environments reproducible and reviewable in pull requests.
- Wrote two operational procedures now used by the team: in-place rescue-mode instance repair and GCE emergency-mode fstab recovery.
- Lead incident response and on-call rotation; mentor engineers on Linux fundamentals, GitOps practice, and production standards.

TECH-NOID SYSTEMS

Remote — Sacramento, CA

Founder & Principal Engineer

2008 – Present · full-time Aug 2023 – Jan 2025

Self-directed technical venture founded in 2008 as a self-built online radio platform, run full-time between engineering roles from August 2023 to January 2025 and ongoing today. Now spans self-hosted infrastructure, open-source tooling, and live performance technology.

- Designed and operate a self-hosted, multi-node Kubernetes cluster (mixed x86_64 / arm64) with Flux GitOps, MetalLB, cert-manager, Helm, and full observability.
- Authored **obs-radio-output** — a native OBS Studio plugin in C/C++ against libobs that streams audio directly to Icecast / SHOUTcast, with macOS universal and Linux builds and a signed, notarized macOS package.
- Manage infrastructure as code with Terraform / OpenTofu, Terragrunt, and Ansible, including Discord-as-Code modules; rebuilt the web platform on Hugo.

SIGHT MACHINE

San Francisco, CA (Remote)

Manager, Site Reliability Engineering

Nov 2021 – Aug 2023

- Engineered multi-cloud, Kubernetes-based infrastructure for a big-data SaaS platform across GCP, Azure, and AWS using Python, Kafka, and Terraform, sustaining **uptime above 99.98%**.
- Drove a **10% reduction in monthly server spend** through autoscaling and spot-instance systems; earned the Golden Gear award for cost measures saving **\$5k monthly**.
- Led the Infrastructure Modernization Project, upgrading to modern Kubernetes configurations and increasing security and automation across the stack.
- Grew the SRE function to three full-time engineers plus two offshore teams for 365-day coverage, and standardized onboarding, on-call, and incident response.

Senior Site Reliability Engineer

Aug 2021 – Nov 2021

- Elevated to Lead Senior SRE within two months. Pioneered Terraform with Atlantis/GitHub CI/CD and established a GitOps framework for all cloud infrastructure.

EMOTIONAL SUPPORT PIZZA

Sacramento, CA

Founder

2019 – 2021

Woodfired ancient-grain sourdough concept built during a break from tech. Built the full digital presence — website, brand, and online-ordering flow — which reignited hands-on engineering and led directly back into infrastructure work.

JUUL LABS

San Francisco, CA (Remote)

DevOps Engineer

Jul 2017 – May 2019

- Delivered 24/7 on-call support for all e-commerce systems; primary support for Windows systems running the Acumatica ERP.
- Implemented log-shipping-based clustering for SQL Server Enterprise, supporting business expansion into multiple regions.

PAX LABS

San Francisco, CA (Hybrid)

Senior Infrastructure Engineer

Nov 2016 – Jul 2017

- Led expansion of AWS infrastructure from 4 to over 100 systems with autoscaling policies for high-traffic volumes.
- Standardized system deployment using Jenkins and Fabric, and implemented company-wide automated paging via PagerDuty.

STUDY.COMMountain View, CA

Systems EngineerSep 2014 – Sep 2016

- Led migration of cloud infrastructure from Rackspace to AWS, growing the fleet from 10 to over 300 systems.
- Implemented full server lifecycle management with Packer, Puppet, PuppetDB, and Foreman, integrated with Jenkins and Rundeck.
- Developed and enforced a disaster-recovery plan safeguarding the data-warehouse project.

META INTERFACESSan Francisco, CA (Hybrid)

Senior Linux AdministratorOct 2012 – Sep 2014

- Administered 1,000+ physical Linux servers and network hardware (Cisco, F5 BIG-IP) for a data center supporting high-demand streaming video.
- Led the initial AWS proof-of-concept that set the groundwork for cloud strategy, and replaced physical servers with a KVM / libvirt virtualized environment.

SELECTED PROJECTS

- **Audiophore** (Rust) — Engine bridging VJ audio analysis (Synesthesia OSC) to real-time lighting across Hue, WLED, DMX / Art-Net, sACN / E1.31, and ILDA lasers. Sub-30 ms latency, Lua-scripted show files, Docker-containerized.
- **annoybots** (Go) — A single Go binary driving many IRC / Twitch / Discord networks at once over a shared Redis bus, with a Markov engine and sandboxed Lua plugins. Race-tested CI, multi-arch distroless images, GitOps (Flux) deployment on Kubernetes.
- **claud-project-kit** — Open-source workflow kit that keeps AI-assisted coding grounded across repos: durable project memory, phased plans, and lifecycle commands, backed by a Bats test suite, CI, and ADRs. Adopted for personal and day-job delivery.
- **recipe-card-maker** (Python / SvelteKit) — Full-stack app with a FastAPI backend, SvelteKit frontend, and LLM-based recipe extraction feeding a Markdown-to-PDF pipeline. Containerized with CI and a full test suite.
- **Bench HUD & parts service** (Python) — Multi-service system for an electronics repair bench: an OpenCV / v4l2loopback compositor fusing microscope, thermal-imaging, and instrument telemetry into a single live video feed, backed by a separate self-hosted inventory service whose REST API the HUD and an intake service both consume. Test-first (585 tests), deployed to a multi-arch Raspberry Pi Kubernetes cluster via Flux GitOps with image automation; customer data isolated from the streaming path by design.
- **Snapmaker U1 firmware tooling** (Shell / C) — Binary analysis scripts for vendor firmware images, plus an upstream contribution to a community firmware fork (889 stars) adding a persistent, update-surviving toggle for a cloud agent service.

TECHNICAL SKILLS

Cloud & Orchestration: GCP · AWS · Azure · Kubernetes · AKS · Flux CD · GitOps · Helm · Docker · containerd · MetalLB · cert-manager · linkerd

Infrastructure as Code: Terraform · OpenTofu · Terragrunt · Ansible · Puppet · Packer · Atlantis

Observability & Reliability: Grafana · Prometheus · Mimir · Loki · Alloy · AlertManager · incident response · on-call · blameless post-mortems

CI/CD & Tooling: GitHub Actions · Jenkins · CircleCI · Rundeck · Fabric · Vault · HAProxy · nginx · Kafka

Compliance: SOX · SOC 2 · PCI-DSS control evidence · external audit support · change management

Languages: Python · Go · Rust · Bash · C/C++ · PHP · JavaScript

Platforms & Data: Linux (Ubuntu, RedHat, CentOS) · Windows Server · KVM / libvirt · PostgreSQL · MySQL · SQL Server · MongoDB · Redis

EARLIER EXPERIENCE

Computer Technician II — Elk Grove Unified School District, Elk Grove, CA2005 – 2012

Developer & Systems Administrator — Groundworks Environmental, Folsom, CA2004

Intern, Network Technologies — Stanislaus County Office of Education, Modesto, CA2003 – 2004

Student Employee, Information Systems — Yosemite Community College District, Modesto, CA1999 – 2003

EDUCATION

A.S., Computer Science — Modesto Junior College, Modesto, CA2004

Computer Programming Specialist Certificate — Modesto Junior College, Modesto, CA2003